

Notice of Allowability

Application No.

09/897,577

Examiner

Susanna M. Diaz

Applicant(s)

DOHERTY, MICHAEL EMMETT

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Examiner's amendment agreed to on July 21, 2006.
2. ☒ The allowed claim(s) is/are 1-5, 7, 10 and 13-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 7/17/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Susanna Diaz
SUSANNA M. DIAZ
PRIMARY EXAMINER
AU 3623

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jay Krebs (Reg. No. 41,914) on July 21, 2006.

The application has been amended as follows (***please note that a clearer copy of the Examiner's Amendment is attached at the end of this Office action for purposes of entry of the amendment***):

Listing of Claims:

1. (Currently amended) A method of assessing communication strength of individuals that participate in electronic communications, the method comprising:
- (a) analyzing a plurality of electronic messages generated by a plurality of individuals to identify a plurality of conversations, wherein each conversation is associated with a talker and a listener, and wherein each talker and listener identified by a conversation is selected from the plurality of individuals;
 - (b) determining communication strengths of at least a subset of the plurality of individuals by modeling the plurality of conversations; and
 - (c) selecting an individual from the plurality of individuals based upon the communication strength thereof;
 - (d) determining, from the plurality of conversations, a plurality of activity indicators, each activity indicator associated with first and second individuals from the plurality of individuals, and each activity indicator representing a level of messaging activity directed from the first individual associated with such activity indicator to the second individual associated with such activity indicator;
 - (e) identifying a first subset of the plurality of individuals as talkers for the purposes of the analysis based upon a talker criterion; and
 - (f) identifying a second subset of the plurality of individuals as listeners for the purposes of the analysis based upon a listener criterion;
- wherein modeling the plurality of conversations includes populating a matrix with activity indicators associated with messaging activity directed from the individuals identified as talkers based upon the talker criterion;
- wherein determining the communication strengths includes simultaneously solving talking strengths and listening strengths for at least a subset of the plurality of individuals using the matrix; and
- wherein simultaneously solving talking strengths and listening strengths includes solving an eigenvalue problem using the relationships;

$$\underline{v = Wu}$$

$$\underline{u = W^T v}$$

wherein

$$\underline{W = \text{the matrix;}}$$

$$\underline{W^T = \text{the transpose of the matrix;}}$$

$$\underline{u = \text{a vector of talking strengths; and}}$$

$$\underline{v = \text{a vector of listening strengths.}}$$

2. (original) The method of claim 1, further comprising harvesting the plurality of electronic messages based upon a domain of interest.

3. (original) The method of claim 2, wherein harvesting the plurality of electronic messages includes searching at least one message archive to identify the plurality of electronic messages and creating a local message archive from which information regarding the plurality of electronic messages can be obtained during analysis.

4. (original) The method of claim 3, wherein the message archive from which the electronic messages are harvested includes at least one of a news archive, a forum archive, a mailing list archive, a chat archive, an instant messaging archive, a telephone record archive and an email archive, and wherein each of the plurality of messages is selected from the group consisting of a message post, an email, a chat post, an instant message, and a telephone record.

5. (original) The method of claim 2, further comprising selecting a study domain from the domain of interest based upon at least one study parameter.

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6. canceled

7. (original) The method of claim 1, wherein each activity indicator comprises a conversation count representative of the number of conversations directed from the first individual associated with such activity indicator to the second individual associated with such activity indicator.

8. canceled

9. canceled

10. (original) The method of claim 1, wherein populating the matrix includes arranging in different areas of the matrix activity indicators associated with messaging activity directed to individuals identified as talkers based upon the talker criterion, and activity indicators associated with messaging activity directed to individuals identified as listeners based upon the listener criterion.

11. canceled

12. canceled

13. (original) The method of claim 1, further comprising scaling each activity indicator using a wearout factor prior to determining the communication strengths.

14. (original) The method of claim 13, wherein determining the communication strengths determines a first set of communication strengths, and wherein the method further comprises determining a second set of communication strengths after scaling the activity indicators using a second wearout factor.

15. (original) The method of claim 14, further comprising generating a diagram that contrasts the first and second sets of communication strengths.

16. (original) The method of claim 15, wherein the diagram includes first and second orthogonal axes respectively representing the first and second sets of

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communication strengths, and wherein the diagram includes a plurality of data points, each representing the communication strengths in each of the first and second sets of communication strengths determined for an individual from the plurality of individuals.

17. (original) The method of claim 16, wherein the diagram further includes bubbles representing groups of individuals having like communication strength characteristics, wherein the size of each bubble is representative of the number of individuals within the group of individuals represented by such bubble.

18. (original) The method of claim 1, wherein modeling the plurality of conversations includes expressing from a model the propositions that a strong talker talks frequently to strong listeners, and that a strong listener listens frequently to strong talkers.

19. (original) The method of claim 1, wherein determining the communication strength for an individual includes determining at least one of a talking strength and a listening strength for such individual.

20. (original) The method of claim 19, wherein selecting an individual from the plurality of individuals based upon the communication strength thereof includes identifying the individual as a connector based at least upon the talking strength of such individual.

21. (original) The method of claim 20, further comprising contacting the individual to perform a marketing activity therewith.

22. (original) The method of claim 21, further comprising initiating an encounter with the individual in a viral marketing context.

23. (original) The method of claim 21, further comprising performing market research with the individual.

Claims 24-36 (canceled)

Allowable Subject Matter

2. Claims 1-5, 7, 10, and 13-23 are allowed.

3. The following is an examiner's statement of reasons for allowance:

The closest prior art of record is Altschuler et al. (U.S. Patent No. 6,151,585) in view of Holtzman et al. (US 2002/0062368). Altschuler discloses the details of a method of assessing communication strength of individuals that participate in electronic communications, the method comprising inferring a plurality of electronic messages generated by a plurality of individuals to identify a plurality of conversations, wherein each conversation is associated with a talker and a listener, and wherein each talker and listener identifier by a conversation is selected from the plurality of individuals, determining communication strengths of at least a subset of the plurality of individuals by modeling the plurality of conversations, and selecting an individual from the plurality of individuals based upon the communication strength thereof. Holtzman's invention teaches a similar analysis of electronic messages to identify discussion leaders in various domains of interest that are searchable and stored by topics in a central data store. However, neither Altschuler nor Holtzman teaches or suggests that simultaneously solving talking strengths and listening strengths includes solving an eigenvalue problem using the relationships:

$$\underline{v = Wu}$$

$$\underline{u = W^T v}$$

wherein

$$\underline{W = \text{the matrix;}}$$

$$\underline{W^T = \text{the transpose of the matrix;}}$$

$$\underline{u = \text{a vector of talking strengths; and}}$$

$$\underline{v = \text{a vector of listening strengths.}}$$

By Applicant's own admission (on page 9 of Applicant's response filed May 3, 2006), " W_{rs} is defined [as] the edge weight from node r to node s , where [the] edge weight represents the level of messaging activity from User r to User s . In one embodiment of the present invention the value W_{rs} represents a 'conversation count' between users r and s . The [value] W is a matrix of W_{rs} values representing messaging activity (page 23, line 14), and the value W^T represents the transpose of matrix W (page 23, lines 14-20)." In light of these definitions cited by the Applicant from the specification, the Examiner submits that claims 1-5, 7, 10, and 13-23 are allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Glance et al. (EP 1 065 607 A2) -- Discloses a system and method of predicting a user's rating for an item in a collaborative filtering system.

Nakamura (JP 11-328275 A) -- Discloses a method and system for information filtering.

Matsunaga et al. (JP 11-161670 A) -- Discloses a method, device, and system for information filtering.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 10 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Susanna M. Diaz
Primary Examiner
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July 21, 2006